MEETING

STATE OF CALIFORNIA

INTEGRATED WASTE MANAGEMENT BOARD

MARKET DEVELOPMENT AND SUSTAINABILITY

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APPEARANCES

COMMITTEE MEMBERS

Mr. Gary Petersen, Chairperson

Mr. Wesley Chesbro, Member

BOARD MEMBERS

Mr. Jeffrey Danzinger

Ms. Rosalie Mul

STAFF

Mr. Mark Leary, Executive Director

Ms. Julie Nauman, Chief Deputy Director

Mr. Elliott Block, Acting Chief Counsel

Ms. Deborah Balluch, Executive Assistant

Mr. Jim Lee, Deputy Director, Special Waste Division

Mr. Howard Levenson, Program Director, Waste Prevention & Market Development

Ms. Lorraine Van Kekerix, Acting Deputy Director, Diversion, Planning, & Local Assistance Division

Mr. Boxing Cheng

Mr. Mitch Delmage, Manager, Tire Management Branch

Ms. Elena Yates

APPEARANCES CONTINUED

ALSO PRESENT

Mr. Michael Blumenthal, Rubber Manufacturers Association

Mr. Matthew Newman, Blue Sky Consulting Group

Dr. Barry Takallou, Crumb Rubber Manufacturers

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PROCEEDINGS

COMMITTEE CHAIR PETERSEN: Good morning, everybody. Welcome to the California Integrated Waste Management Board, Sustainability and Market Development Committee Meeting. We have a biggy this morning.

As a courtesy, please turn off your cell phones or put them on buzz.

And don't forget, we have slips in the back of the room. If you want to speak on something, make sure you get it up to Deb.

And I would like to acknowledge that we have one of our famous other Board members here, Jeff Danzinger.

And Deb, could you call the roll, please.

EXECUTIVE ASSISTANT BALLUCH: Brown?

Chesbro?

MEMBER CHESBRO: Here.

EXECUTIVE ASSISTANT BALLUCH: Petersen?

COMMITTEE CHAIR PETERSEN: Here.

And are all the members of the committee up-to-date on ex partes?

I just said hello to Michael and Scott at CIW.

Is there anyone who wishes to address the committee on any issue that's not on the agenda today?

All righty.

I guess what I would like to do, since there's

not -- Lorraine is here -- great.

We will start off with a deputy director's report this morning.

But first I would like the opportunity to congratulate our pal and friend, Howard Levenson, over here, for now getting back into the camp over at marketing and sustainability.

You are sustainable, aren't you?

WASTE PREVENTION & MARKET DEVELOPMENT PROGRAM DIRECTOR LEVENSON: I hope so. Talk to me in a year.

COMMITTEE CHAIR PETERSEN: Well, congratulations, Howard. This is really going to be great. Thank you very much for coming on Board and being patient. You are going to be patient.

WASTE PREVENTION & MARKET DEVELOPMENT PROGRAM DIRECTOR LEVENSON: Being what?

COMMITTEE CHAIR PETERSEN: Patient.

Anyway, let's see. What do we got?

Jim?

DEPUTY DIRECTOR LEE: No deputy director's report for me today, Chairman Petersen.

COMMITTEE CHAIR PETERSEN: Lorraine, please.

ACTING DEPUTY DIRECTOR VAN KEKERIX: I'm Lorraine Van Kekerix, and I'm giving the deputy director report for

Diversion, Planning, and Local Assistance Division activities.

First of all, the Statewide Characterization Study is out on the street in terms of request for proposals. The proposals are due on April 17th, and we are looking forward to bringing you the award of the contract at the May Board meeting. So there will be a very fast turnaround in terms of reviewing these proposals and getting the agenda item prepared. But we're on track so far. We have a few questions that came in when the proposal was first released, and we anticipate that we'll get some proposals coming in next week.

I also wanted to update you on activities of the Office of Local Assistance staff, Ogilvy public relations, and various Board subject matter experts. The Office of Local Assistance staff has been working closely with Ogilvy and Board subject matter experts to reach out to local jurisdiction regarding rubberized asphalt concrete tire-derived aggregates, organics and recycled aggregate materials. The Office of Local Assistance has become involved so that they can continue on with this activity after the Ogilvy contract ends.

Informational meetings with local jurisdictions have recently occurred in Southern California and the Bay Area and are making plans for additional visits. The

group is also collaborating to construct and conduct training for future Local Assistance and Market Development Division on how to best spread the word about these recycled materials and increase the usage.

Training on the specific material types will occur in June or July of this year, with a more comprehensive outreach training occurring shortly thereafter. So we're moving towards the staff doing these trainings with the elected officials.

And the final item I have for you this morning is related to school garden Web pages. Office of Local Assistance staff recently coordinated with staff and the Office of Environmental Education to update the Board's school garden Web resources. The updated Web page provides users with resources regarding implementing a school garden, including incorporation of recycled and reused materials, funding the garden, and tying the entire garden experience into the standards-based curriculum.

This resource also provides a number of case studies for reference and peer matching. It's a terrific tool for schools and another excellent example of cross-divisional coordination.

And that concludes my deputy director's report.

COMMITTEE CHAIR PETERSEN: Thanks Lorraine.

Any questions?

I would also like to recognize Member Mulé, who's just joined us.

BOARD MEMBER MULÉ: Good morning.

COMMITTEE CHAIR PETERSEN: Good morning.

Okay. I guess we're going to B, Consideration of Grant Awards for the Targeted Rubberized Asphalt Concrete Incentive Grant Program, Board Item 9.

DEPUTY DIRECTOR LEE: Thank you, Chairman Petersen. Good morning, Board members.

My name is Jim Lee. I'm with the Board's Waste Tire Management Program.

Committee Item B is Consideration of Grant Awards for the Targeted Rubberized Asphalt Concrete Incentive Grant Program.

With this particular grant program, we are following a timeworn marketing strategy of providing a product at a lower cost to -- to introduce it to jurisdictions, in this case jurisdictions and communities that are unfamiliar with its use. We all know that RAC has long-term benefits, but the initial up-front cost of the material compared to conventional, it is higher. So there is a need to kind of overcome that initial barrier and show -- introduce it to, you know, communities so they can become aware of its long-term advantages.

The Five-Year Plan had an allocation of

$2.4 million for this particular program, plus there was an additional $4 million in resources made available for BCP. So again, the Board is devoting significant financial resources to this particular area. Furthermore, the Board did elect to further facilitate this process by having a continuous grant application and filing for this, and a monthly grant award.

We've been very successful to date. I think we're going to turn it over, in just a minute, to Elena Yates, to tell you, again, about the projects that we expect, that we want to recommend to the Board for approval today.

I'm also advised by staff that, and we remain cautiously optimistic that, by the end of the year, and with the remaining two months, that we will be -- we will have encumbered all the of the money that I mentioned earlier in my discussion. Indeed, we may even be oversubscribed. So again, we look forward to that eventuality.

With that as an overview, I'll turn it over to Elena Yates to make the remainder of the staff presentation.

MS. YATES: Thank you, Jim.

Good morning, Chairman Petersen and Committee Members. I'm Elena Yates.

Today I will present staff's recommendation for

this month's award for the targeted RAC grant program. Staff received five eligible and complete applications for a total of $78,000,176. The applicants are the City of Napa, funding recommendation, $178,176; City of Meno Park, funding recommendation, $175,000; the City of Blythe, funding recommendation, $150,000; the town of Apple Valley, funding recommendation, $150,000; the City of Santee, funding recommendation, $125,000.

In addition, there are three other applicants that staff is conditionally recommending for funding. They originally applied for the RAC used grant program. And staff determined that they are eligible for the targeted RAC grant program. Therefore, we will need to revise the resolutions.

The reason why we're having these three applicants considered now is for -- is because of project timing issues. Because they will miss the opportunity for a grant, we delay consideration of their applications.

If approved for funding, staff will not enter into grant agreements until the new resolutions are received. The applicants are City of Pacifica, funding recommendation, $175,000; City of Richmond, funding recommendation, $175,000; the City of National City, funding recommendation, $150,000. That's a total of $500,000 for these three applicants.

Staff recommends that the Board approve the proposed award and adopt Resolution No. 2007-83 Revised.

This concludes my presentation.

Are there any questions?

COMMITTEE CHAIR PETERSEN: Questions?

MEMBER CHESBRO: So the three that are being conditionally approved really only need to make minor changes to the resolution, not significant changes to their application.

MS. YATES: That's correct.

MEMBER CHESBRO: So there's no need for them to come back then?

MS. YATES: No.

COMMITTEE CHAIR PETERSEN: Any other questions?

We have one speaker on this item, and Dr. Barry Takallou.

MR. TAKALLOU: Chairman Petersen, Members of the Board.

I'm Barry Takallou, president of CRM company. On behalf of my company and Rubber Pavement Association and California Pavement Association, I would like to thank the Board for supporting the RAC projects. There has been tremendous impact in the recycling of the tires. Not only RAC projects recycling tires -- based on the research by Caltrans and the Department of Transportation, Texas

Department of Transportation and Federal Highway Administration, it showed RAC reduced the traffic noise level by at least 6 decibels and improves the roadway safety.

I just gave a paper, a presentation, two weeks ago, in Brussels, to appear on tire recycling. And we documented these benefits, which is from Caltrans database and other DOTs. And I have a few copies for the Board members and staff.

COMMITTEE CHAIR PETERSEN: Mitch, would you check and make sure his mike is on, please?

TIRE MANAGEMENT BRANCH MANAGER DELMAGE: The light is on.

MR. TAKALLOU: Sorry.

COMMITTEE CHAIR PETERSEN: I can't hear. That's why I need this stuff.

MR. TAKALLOU: I was trying to talk loud.

As the paper shows, in front of you, the contribution of the tire recycling in highway materials is not only contributing to recycling tires, it's also contributing to safety and traffic noise level.

To that extent, we -- they started that the recycling tires into the roads and now the data by Texas DOT shows reduction of fatalities they had when they converted from conventional asphalt to rubberized asphalt,

to reduce the number of fatalities in the areas where they had a safety program.

MEMBER CHESBRO: And why was -- why is that?

MR. TAKALLOU: Because rubberized asphalt is a porous material. And during the rainfall, you don't get hydroplaning and is -- you have a higher friction between the tire and the pavement.

And I brought a copy of this paper for you guys. Because in Europe, this received a tremendous amount of reception because they designed a roadway system for safety and traffic noise --

COMMITTEE CHAIR PETERSEN: Right.

MR. TAKALLOU: -- versus in this country, instead we don't have a policy, the type of the pavement, for noise reduction. Noticing on the paper, it shows Texas DOT, they are putting in an emergency fund when they find out reduction of the fatality in that area. They actually introduced a piece of legislation which they increase their funding to convert to asphalt rubber.

Of course, California has been a leader, thanks to the Board. The Board has done a leadership since 1990s. They supported RAC projects.

Also, since I was here -- I'm a messenger on behalf of California Asphalt Pavement Association. This is the association of the contractors, users, cities and

counties. And Rubber Pavement Associations, they have a letter for the Board. At this time, RAC projects are getting support of $4 per ton of mix. One ton of the mix uses three recycled street tires. One lane mile of asphalt rubber recycles up to 2000 tires for one lane mile. The assistance is about $4 per ton. It's almost $1.25, $1.30 per tire which is getting recycled. There are competing programs which Board allows up to $5 per tire.

Asphalt rubber uses more asphalt. The cost of the asphalt has went up from $140 a ton. Now we are looking about 300 to 350 dollars per ton. So cities and counties, they are facing higher cost of asphalt rubber.

And the memberships of the Board associations, we are requesting Board consider higher level of assistance from $4 to $10 per ton. This would be -- still would be almost $3 per tire, which would be a lot less than the competing programs.

Of course, the idea is if the project is working so good, the cities and counties would like it and pay for it. But cities and counties are also going through budgeting problems. So if the Board can consider higher level of assistance to the cities and counties we would appreciate it.

COMMITTEE CHAIR PETERSEN: Great. I have a couple

of questions while you are here.

MR. TAKALLOU: Sure.

COMMITTEE CHAIR PETERSEN: Reduction and noise by 6 decibels on tire noise? That's amazing.

And -- and I'm just thinking of all the attributes of what this is. Now, the first costs are higher, but when replacement cost or replacement time, it lasts longer on the street; correct?

MR. TAKALLOU: Yes.

COMMITTEE CHAIR PETERSEN: How much longer?

MR. TAKALLOU: Twice as long.

COMMITTEE CHAIR PETERSEN: That's amazing.

And the other question I have on tire dust. Does it help eliminate or reduce tire dust wear on the asphalt, where cars are driving over the asphalt.

Does anybody know that? There's no data on that?

TIRE MANAGEMENT BRANCH MANAGER DELMAGE: There's no data on that.

MR. TAKALLOU: There's no data, but common sense --

COMMITTEE CHAIR PETERSEN: This is not a curve ball. I just want to ask --

MR. TAKALLOU: As common sense would say, yeah it should. It should reduce the tire wear.

COMMITTEE CHAIR PETERSEN: Great. I appreciate

your coming today, and I thank you for your comments.

With regard to the last item on the more support, I think that we have to address that in the Five-Year Plan.

Is that part of the -- been addressed in the Five-Year Plan?

MR. TAKALLOU: I'm just the messenger. I'm not --

COMMITTEE CHAIR PETERSEN: No, you're a good messenger.

I like your tie. It works. That's great.

MR. TAKALLOU: The point I'm trying to make is, this is a technology Board has supported. And when I gave in presentation in Brussels, European Tire Recycling Conference, and they all grabbed it as this as --

COMMITTEE CHAIR PETERSEN: Are they using RAC over there now?

MR. TAKALLOU: Limited. They do not have the technology and the know-how yet.

COMMITTEE CHAIR PETERSEN: Well, it's going to be like when we started recycling here and we were doing -- we thought we were doing a bang-up job in the '70s. And the Europeans came over to see what we were doing. Then they went back and went right by us, as far as recovery rates and everything. They will pick up on it. They are not stupid.

That's great.

MR. TAKALLOU: We got a group coming to visit you guys because you have such a success program. I was talking to Italian group. Italy happened to be almost the same amount of rubber generated in Italy than California. And they need our help. And also, I brought copies of the tire recycling issues in Europe so you can see their programs.

COMMITTEE CHAIR PETERSEN: Very interesting.

Thank you very much, Doctor.

MR. TAKALLOU: Thank you.

COMMITTEE CHAIR PETERSEN: I think there's one question.

MR. TAKALLOU: Yes, Senator?

MEMBER CHESBRO: Given the -- as you said, the focus on safety and sound, it's very logical that they would have -- in addition to their recycling implementation that that's sort of three strong positives about why they want to get on board.

Let me ask you here, in California, I noticed in our document -- we just glanced through it -- that Caltrans is involved in some research with regards to the noise issue, the sound issue? Are they looking at the cost comparisons with the amount of the sound reduction that occurs because of RAC versus the amount that's spent

to construct sound walls?

MR. TAKALLOU: There are considering that. There are data from Caltrans which it showed reduction of the noise --

MEMBER CHESBRO: That seems like it could significantly add to the cost effectiveness argument if you -- in addition to that, I think we all know sound walls is mixed in terms of the fact that they reduce sound in some areas and then they send the sound to another area, whereas I think if the -- which is sort of a Band-Aid that doesn't really solve the problem, where as if you are actually reducing the noise generation in the first place. You have solved the problem, and it doesn't just displace sound, which sound walls do.

MR. TAKALLOU: The difference between Europe and the United States, we -- Caltrans is the recipient from Federal Highway Administration. Right now, Federal Highway Administration, they do not -- they do not recognize the top of pavement as a noise reduction method. It is not in their policy. In Europe, the top of the pavement, it is their policy. They can reduce the noise level in lieu of the sound walls.

There's a group of us. We are going to see actually the Secretary of Transportation, Mary Peters. She is from Arizona. She is an ex-Arizona DOT director.

We're going to go see her in June to see if we can work with Federal Highway Administration to consider to put the top of the pavement as a policy for reduction of noise.

Just for as a rule of thumb, one decibel traffic noise is the equivalent of two feet of sound wall. So you use the sound wall by two feet for every decibel.

COMMITTEE CHAIR PETERSEN: Interesting.

MEMBER CHESBRO: It seems to me -- and I don't know if staff has any response on this, but there's two comparisons that need to be made. One is the -- which is the relative effectiveness in sound reduction. And the second is cost. And you know, if we're achieving -- if we can achieve anything even comparable in terms of sound, noise reduction and do it more economically with RAC, that winds up being an additional one more argument, that's an economic one, for RAC. And to the relief of the folks who represent the tire folks, you know, justifies potentially some other founding sources that may be money that's now being spent on sound walls to supporting RAC.

But do we know to what degree Caltrans is looking at that, or are we talking to them about looking at that?

DEPUTY DIRECTOR LEE: Senator, we've been working Caltrans for a number of years.

MEMBER CHESBRO: I know that's true, generally.

DEPUTY DIRECTOR LEE: We're introducing them

specifically to the benefits of RAC. And I think, again, our efforts, the Board's efforts, are meeting with qualified success there in recent years.

We have seen initiatives coming from their chief district engineer to the Caltrans district, strongly encouraging them to utilize RAC. I believe they are aware of the sound attenuation, the benefits of the product as well as the longer life considerations as well. You know, and again I think they are slowly coming to appreciate that. We see new initiatives that they have -- as I say, that they have adopted.

So, you know, we are -- and again, also with a new director, Mr. Kempton, he's working with us on green highways initiative. So I think that they are aware of this. And I think things are moving forward on this front.

MEMBER CHESBRO: But I haven't heard you specifically address the cost comparison question.

So I would really -- to the degree that hasn't been part of the mix, I would encourage our staff to talk to Caltrans about looking at that question while comparing it -- I know we have been comparing the benefits in terms of longevity and sound, but then mixing into it the question of how much does it cost per mile to reduce the cost of the sound wall? And how much does it cost per

mile to reduce the cost by using RAC? That would be my strong request of staff.

COMMITTEE CHAIR PETERSEN: Rosalie?

BOARD MEMBER MULÉ: Thank you, Mr. Chair. And Senator, just so you know, we had a workshop here about a year or year and a half or so ago, where we had representatives from Arizona and Texas. And I believe Arizona did just that, was present their -- their cost-benefit analysis on the cost savings of using RAC as opposed to using sound walls. So that information is out there for other states.

And so again, I agree with your recommendation. And hopefully staff can share that information with the Caltrans staff.

DEPUTY DIRECTOR LEE: Certainly.

MR. TAKALLOU: If the Board has any time, at the presentation coming out of this paper, we have actually live videos. You can actually see the pavement, the difference between, given side by side, normal asphalt and rubberized asphalt, hydroplaning benefits, noise benefits. If anytime you want, we would be more than happy to provide the same presentation.

COMMITTEE CHAIR PETERSEN: That would be great. Thank you very much.

Michael, on the cost question here --

MR. TAKALLOU: Thank you very much Doctor.

COMMITTEE CHAIR PETERSEN: Thank you.

MR. BLUMENTHAL: Thank you, Mr. Chair. My name is Michael Blumenthal. I'm with the Rubber Manufactures Association.

And I can tell you that the Federal Highway Administration does have a panel out there on quiet pavement. RMA is a member of the Quiet Pavement Task Force. We've had a series of meetings on this topic.

And I can make staff's life a little bit easier, because I have that information, from the U.S. and from Europe, on the cost comparisons between road noise reduction techniques versus the cost of the sound wall.

When I get home on Thursday, I will go through my files and I will pull things out and make copies and send them to Mitch. I'll send them to Mitch to get them going, because there is a fair amount of information that already does exist out there on this topic. And I think it is a good way to heighten the awareness of what RAC can do.

In addition to everything that it can do, the quiet pavement is a -- more of a quality of life issue more so than a road issue, and that also comes into play.

MEMBER CHESBRO: Of course, you realize that we're spending lot of money on sound walls.

MR. BLUMENTHAL: But I will be -- I will make

myself a note so I don't forget. And Mitch will call me on Thursday to remind me. And I will make copies of --

COMMITTEE CHAIR PETERSEN: Everybody's talking. This is great. Thank you, Michael.

Are there any other comments? Do I hear a motion?

MEMBER CHESBRO: Yes. I will move the resolution. I don't have the number at my fingertips, here. 2007-83 --

COMMITTEE CHAIR PETERSEN: -- Revised.

MEMBER CHESBRO: -- Revised.

COMMITTEE CHAIR PETERSEN: I would second that, since I'm here.

EXECUTIVE ASSISTANT BALLUCH: Chesbro?

MEMBER CHESBRO: Aye.

EXECUTIVE ASSISTANT BALLUCH: Petersen?

COMMITTEE CHAIR PETERSEN: Aye.

Grand.

Thank you very much. And we're going to fiscal consent. How's that?

All right. Okay. Now we have 10, a presentation.

Jim?

DEPUTY DIRECTOR LEE: Thank you Chairman Petersen. Committee Item C, Board Item 10, is an oral presentation on estimating the annual waste tire generation in California. Needless to say, the statistic on the per

capita tire generation is a very important statistic for use in our work. It tells us how many tires we have to deal with and find acceptable homes for, for diversion or recycling.

We have utilized some statistics that we've generated internally. We've relied on other data that's come from -- that's used in other states and at the national level.

We thought it would be very useful and productive to have an independent third party evaluation of this particular issue. And, you know, I previewed some of the work that they are going to be presenting today, and I think you will find it interesting and informative and I think a validation of some of the techniques that staff has used to date.

So with that, I would like to turn it over to Boxing Cheng, who will introduce our -- make a presentation and then introduce our contractor.

COMMITTEE CHAIR PETERSEN: Thank you, Jim.

Good morning, Boxing.

MR. CHENG: Good morning, Committee Chair and Board Members.

This is Boxing Cheng. I'm here to present an item, oral presentation, on waste tire generation, diversion, and the disposal in California.

The contractor, California State University of Sacramento, has developed a computer model to estimate annual waste tire generation, diversion, and disposal in California.

Now I have Dr. Matthew Newman here for the presentation.

COMMITTEE CHAIR PETERSEN: Thank you.

(Thereupon an overhead presentation was presented as follows.)

MR. NEWMAN: Good morning. Actually I'm not a doctor.

COMMITTEE CHAIR PETERSEN: You are a doctor now.

MR. NEWMAN: Thank you very much for the promotion.

I, together with my colleagues from Sacramento State, have been working with Boxing and the staff here to try to put together a better way of estimating the number of waste tires that are generated each year in California. And we also have taken a look at the diversion and disposal numbers along the way.

So I've got some slides here. I'm going to go quickly through this. But I would like you guys, if you would like, to interrupt me along the way and ask questions. I would like this to be as interactive as possible.

--o0o--

MR. NEWMAN: So let me see if I can make this work.

So what we did is we reviewed the estimation techniques that are used by all of the other 50 states. And then we evaluated the methodologies which they use. We decided that the best thing for us to do was to build a model specific to California.

I will go over how we built the model, the data that we used to build it, what the results are, and finally, talk a little bit about diversion and disposal. And then if you still have patience for me, I will demonstrate how the model actually works.

--o0o--

MR. NEWMAN: So we contacted the other 49 states, and we found that 12 of the states don't appear to estimate the amount of waste tires that they are generating, or they couldn't find someone to tell us that they do so, or had a Web site that indicated that they do so.

And 37 states do something to estimate waste tire generation. Most of the states that have some kind of estimate basically rely on the one tire per person per year standard, which is something which the RMA has validated and which the federal EPA uses, as a sort of

shorthand way of estimating the number of waste tires generated. And then there are 12 states that do something other than the one tire per person.

MEMBER CHESBRO: May I to interrupt?

MR. NEWMAN: Please.

MEMBER CHESBRO: Wouldn't that vary state by state, based on vehicle miles driven per person?

MR. NEWMAN: Absolutely.

MEMBER CHESBRO: Which as I understand it, it is quite -- I mean, in the West, for example, they drive a lot more miles than in the East, just because things are further apart.

MR. NEWMAN: There's all kinds of reasons why it would vary from state to state. And as you see, we decided that the one tire per person per year measure wasn't -- wasn't as good a job as can be done to estimate --

MEMBER CHESBRO: That's considered sort of an average, for the whole country, or a rough average? Is that what the significance of that number is?

MR. NEWMAN: It is considered an average. Although, so many states use it that it's sort of a self-fulfilling prophecy, if you will, that that's what the average would be, because it's just the one that so many states use.

But --

MEMBER CHESBRO: It's not necessarily based in sound statistical fact?

MR. NEWMAN: As I said, the RMA has done some work, and they can tell you more about what they've done, than I have, to validate that number. And they've concluded, I think, recently that they think it's pretty accurate as a national average, but for reasons that I will demonstrate for you later.

MEMBER CHESBRO: Okay. I will wait.

MR. NEWMAN: I don't think it's as good as we can do for California.

So of the 12 that don't use that measure, there's four that just rely on measuring the number of tires sold. They have a tire fee program similar to the one we have here. And they count up the tires sold and they essentially use that as the measure of tires generated.

There's five states that track the waste tires that are collected. One does an industry survey, and then there are two that have sort of a state-specific model, similar to the one that we have developed for California.

--o0o--

MR. NEWMAN: So as I was saying before, the RMA, in 2005, measured scrap tires and the number of people and came up with a one person per year measure across the

state. And they also did a survey and asked states to report what they found and the states also reported 1.1 PTEs per year, on average.

The difficulty of -- of using the per capita metric is, as I said, it relies on the survey, and a lot of the states use that as their measure. So when they respond to the survey, they say, "Yeah, it's one tire per person per year," and it sort of feeds on itself.

And it also is possible that it doesn't properly account for tires that are not included in the RMA's work, so they may exclude off-road tires, for example, which are very large tires. They use, look at, passenger tires. And it certainly doesn't account for the variation across states.

--o0o--

MR. NEWMAN: The fee revenue is a good way to know how many tires are sold, but it doesn't tell you about all the other flows of tires. If people are moving into the state or equipment is moving into the state, it wouldn't be counted by the fee revenue, so it's a little of an oversimplification. It may exclude government vehicles as well, which also would mean there could be an undercount.

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MR. NEWMAN: There are two states that use custom models. But they -- Washington and Florida. But they are

both very, very simple models that rely on just two or three input parameters. And so neither of those states provided what we felt like was a really useful model for us to copy.

So we decided that we would develop our own model. And, you know, I don't mean to be immodest, but I think together, with your staff, we have developed what is really the state-of-the-art -- nationally, in terms of estimating the number of waste tires that are generated every year. There's no other state that does something which I think is more accurate and more sophisticated than what we have done with your staff. So I think you all should be proud of the work your staff has done in putting this together.

We felt that our model should do four things:

It should fully incorporate all the tire flows. So not just the new tires sold, but the government tires that are sold that don't pay the fee; tires that come in on cars that people bring with them when they move into the state, or on equipment, which companies bring into the state when they expand or relocate here. You should track those tires over their life span, so not just noting the year that the tire is sold, but figure out how long those tires last before they actually enter the waste stream. You get a lot of variation along that parameter.

And then it should be state-specific and flexible and modifiable, so as things change in the future, this is not just a static estimate, but it's one that your staff will be able to update. So next year, if there's new information available, they can put in the new data. The model will recalculate the result that will be more accurate for that year.

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MR. NEWMAN: So our model basically calculates the number of new tires sold or entered in the state every year. It assigns them to different categories by weight, because there's a lot of variation in the weight of tires. If you are a state that has, for example, more SUVs than pickup trucks, you are going to have a higher average tire weight than a state that might have smaller cars.

It estimates the -- our model estimates the length of time these tires stay on the road. It calculates the weight of these tires when they are waste, because they don't weigh the same when they are new as when they are waste. A lot of the tires weigh -- almost 20 percent is left on the road.

And then it calculates the results of tons of waste tires generated.

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MR. NEWMAN: So this diagram sort of lays out the

basic way that the model works. And you can see, here's where the new tires are. BOE sales data tells us how many tires were sold. Then there's other tire sales from the Internet and elsewhere. There's used tires from that migration.

These tires are allocated to five different categories. Then we account for retreading of the tire classes, or sizes, that are retreaded, estimate how long they are on the road, and then ultimately calculate the amount of waste that's generated.

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MR. NEWMAN: This is an overview of all the different parameters that we looked at in putting the model together. I'm not going to read all the things on here. But you can see, there's a lot of different things that we looked at: number of tires, how many vehicle miles traveled, the tread life of these tires, the tire size. So there's a number of factors, several dozen factors, that we looked at, to put our model results together.

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MR. NEWMAN: So the first step. New tires sold, that we know about, from the BOE; new tires coming in from out of state, via Internet; government tire sales; and then used tire sales -- or used tires coming in on vehicles. Those are the tire flows.

The second step, assign these tires to the five categories I mentioned. We did this based on national sales data. And as you can see here, 78.45 percent of all the tire sales by number of tires are passenger tires. But passenger tires account for a much smaller fraction of all the waste generated, because they are lighter than all these other categories of tires. The medium truck and heavy truck and off-road tires are very heavy.

MEMBER CHESBRO: Can you take a half-step back, a moment?

MR. NEWMAN: Please.

MEMBER CHESBRO: Since you are calculating the -- including the tires on vehicles that are coming into the state, are you also subtracting the ones for net, out-migration?

MR. NEWMAN: Absolutely. Yes, it's the net migration numbers.

MEMBER CHESBRO: So it's in and out.

MR. NEWMAN: Exactly, yes.

And if it were the case that we were losing population, then that would be a negative number. It's typically positive for us, and so it's a positive number.

And we don't assume those tires are new by the way. We assume that some of their life has been used up, out of California. So they enter the waste stream faster

than a brand new tire, because they might be half -- half their life might be used up.

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MR. NEWMAN: So we assign these tires to categories. We account for retreading. Passenger tires and light truck tires are typically not retreaded. Our model is flexible enough to allow for changing that. If it becomes common practice for tires to be retreaded, we can estimate what the impact of that would be. Although typically, it's just medium, heavy truck, and off-road tires that are retreaded.

The next step is to calculate the weight of these tires as waste, so we take the new weight for -- and we look at the most popular tire sizes. We figure out how much they weigh when they are new. We estimate how much they weigh when they are waste. And then that's the number that ends up in our model.

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MR. NEWMAN: And then we finally compute the results, which basically means following a tire -- when we say "tire cohort over the years," what we mean is, we figure out when the tire was sold, we figure out how many miles per year that tire is driven, then we estimate actually the month that tire, we think, will enter the waste stream. And we do that for all the different

classes of tires. We sum up the results over all the months for that year, and the result is the number of waste tires generated for that year.

So what we found, based on the data that we've got in the model right now, is that during the 2005 to 2009 period -- and we're able to project a couple years ahead here pretty accurately, because the tires that are going to become waste in 2009 are already on the road right now. And so going beyond 2009 gets a little bit more speculative.

But for the next couple of years, we know how many were sold. We know how many people have moved here. And so we can pretty accurately estimate what the waste tire generation will be.

So we come up with a number of 1.24 passenger tire equivalents per person, per year, for the average of this period, which is about 46 million PTEs per year.

What this table shows is --

COMMITTEE CHAIR PETERSEN: Excuse me. What is our average number we are using? Was it 1.1?

MR. NEWMAN: 1.1 is what the RMA had been estimating. I believe that your staff has estimated -- I don't know. Boxing, what was your most recent estimate?

MR. CHENG: 1.12.

MR. NEWMAN: Just slightly lower.

COMMITTEE CHAIR PETERSEN: Wow. Okay.

MR. NEWMAN: So pretty close to what we've come up with here. You can see, there's a little bit of variation. The 2007 here is a little lower here, 1.15. That reflects a large part of the recession of the beginning of the decade: Fewer tires were sold; fewer people were moving here when that happened.

So when those tires become waste, there's a little bit lower waste, although there's a number of factors that go into this.

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MR. NEWMAN: This shows the sources of waste tire. And if you remember before, the sources of new tires show that passenger vehicles were about 78 percent of all the tires sold, but they are just over half of the waste.

And in these other categories of tires -- the light truck, medium truck, heavy truck, and off-road tires -- that account for a much larger share of the waste than their sales numbers, we indicate, obviously, it's important to track these tire sources because they are such a large fraction of the waste that's generated.

MEMBER CHESBRO: Is that by weight or by number of tires?

MR. NEWMAN: This is by weight.

MEMBER CHESBRO: So how do you explain the

variation between the sold and the disposed?

MR. NEWMAN: The sold is number of tires, because that's what we contract from the BOE data. But it's really the weight that matters so much.

MEMBER CHESBRO: Gotcha.

MR. NEWMAN: The things that really kind of drive -- like I said, there's several dozen parameters that we estimated or collected data on, for this model.

But the thing that really makes the most difference is the sales of new tires. You know, the more tires you sell, the more waste you generate. The weight of these tires really matters a lot too. So if -- as we have more pickup trucks and SUVs, the average tire size and weight goes up. So the composition of the vehicle fleet makes a big difference. And we're probably, I think, sort of reaching a peak in terms of that. And the average tire size will probably go down a little bit over the next few years, which will, naturally, reduce the number of waste tires generated.

And then the extent of retreading also matters a lot too, just because the medium truck tires and the off-road tires that get retreaded, though a small fraction in terms of number of sales, really weigh a lot. And especially, the immediate truck tires, they stay on the road for a long time. So the more those tires are

retreaded, the less waste enters the waste stream.

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MR. NEWMAN: So as I said, you know, our estimate is 1.24 passenger tires equivalent per person per year. But it's important to note, there's a lot of variation in the parameters. And we estimated what we think is the best guess here.

But this chart shows the average weight of a tire. And you can, the taller the bar, the more tires there are in this group. So the most common weight is 21 to 22 pounds. But there are tires out here, just on passenger vehicles, that weigh 50 pounds.

And so if the estimate -- if our point estimate were to change over time, or if the composition of the fleet were to change over time, then the waste tire generation estimate would definitely change as well.

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MR. NEWMAN: The last thing we looked at is we -- to the extent we were able, we looked at diversion and disposal. Your staff had estimated that there were -- for 2005, there were 40.8 million tires generated that you were able to track with the survey that Boxing does, which doesn't include everybody. It includes almost everybody, but not everybody.

And so the difference between the 40.8, that he

tracked, and the 44-or-so million PTEs that we estimate for that year, I think, is the smaller haulers and recyclers that aren't reporting on the survey.

The diversion rate that was estimated was 75 percent. If we apply that same rate to our number of the total number of PTEs generated, you get a total diverted of 33.6 million PTEs.

The RMA estimated that it was about 68 percent that were diverted, so our numbers are a little bit higher than those.

And the national average rate is about 86.6 percent, which is slightly higher than what we're estimating right now.

BOARD MEMBER MULÉ: And do you know what that's attributable to?

MR. NEWMAN: The reason that the national average is higher?

BOARD MEMBER MULÉ: Yes.

MR. NEWMAN: I don't know.

One reason may be that not all of the tires that are actually generated are getting captured in that survey. I think we're capturing everything now, so our total generated number might be a little bit higher, so our diverted number, as a percentage of that, might be a little bit lower. You know what you are capturing, and so

the denominator of your fraction is a little smaller if you are not capturing all of the flows of waste tires, whereas I think, our estimate captures all of them or almost all of them.

MEMBER CHESBRO: Well, my question wouldn't be why is ours less than theirs? But I'm just surprised that nationally, it's that high.

DEPUTY DIRECTOR LEE: Senator, we believe that -- excuse me. Senator, I believe one of the answers to that question is there's a much higher rate of tire incineration in the other states than there is in California. The Board is statutorily prohibited from financially supporting that.

BOARD MEMBER MULÉ: Yeah.

MR. NEWMAN: Now, if you have about 60 more seconds of the patience for this topic, I can show you how the model works. It's pretty cool, actually. You can change a parameter, and everything updates.

COMMITTEE CHAIR PETERSEN: Great.

MR. NEWMAN: So I have to get your staff to pull up the spreadsheet that I loaded.

Can someone get that showing on the screen?

It's right on the desktop of the computer, there.

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MR. NEWMAN: This shows the results of the model

with the parameters that are set currently. But supposing you wanted to change the tread life and say, what if tread life is 10 percent longer than our baseline estimate?

I can't see the scroll bar, which is over here.

Can you push the little button that says "run model"? Can you see it on there? It's off the screen, to the right.

And if you tell it to run the model, it recalculates everything. And you can see that the results are a little bit -- they should be a little bit lower than our baseline, which was 1.24 PTEs. Now it's 1.16. So longer tread life means tires last longer, there's a little bit less demand for new tires, and consequently, the number of waste tires generated would go down.

Another -- I just put two examples here of factors you can change. This one shows the tire weight. If the tire weight goes down to, say, 18 pounds instead of being 12.3 or .4 pounds that they are right now, on average, then, again, that will lead to a further reduction in the number of waste tires generated.

So you can see the number should go down a little bit, after everything recalculates. And instead of 1.16, it's 1.07.

So these are just to illustrate -- and as I said, these are just two of the -- two or three dozen factors

that are adjustable in the model. And we, of course, estimated what we felt like was the most accurate point estimate for each of them. But if we discover that things have changed over time or that there's a better estimate out there, this is very easily updatable. And I've been working with your staff, so they hopefully know how to use it and can update it without help from us, but of course we're happy to help them if that's what's needed.

That's all I have prepared.

I'm happy to answer questions if there are more of them.

COMMITTEE CHAIR PETERSEN: Great. Thank you.

Any questions?

Okay. We have one speaker.

MR. NEWMAN: Thank you.

COMMITTEE CHAIR PETERSEN: Thank you very much for your presentation.

Thank you, Boxing.

Michael Blumenthal?

I have a question for you, Michael, too.

MR. BLUMENTHAL: Fire away.

COMMITTEE CHAIR PETERSEN: Well, I understand -- I'm scratching my head here. We got an incredible tire recycle program in the state of California. And the 86 percent is because they are using it for fuel in other

parts of the country. So there's a value on these tires.

Is there a higher value on the tires in other states than there is here, that draws it out of the waste stream?

MR. BLUMENTHAL: There's a very uneven playing field out there. Even if California could use more tires as fuel, you have a limited number of potential end users for fuel.

COMMITTEE CHAIR PETERSEN: Right.

MR. BLUMENTHAL: We're finding -- let me just back up a second.

The 86 percent is based on units, not on weight. And I will get into more on units versus weight when I go through my critique of this plan.

The 86 percent is on units, which is how we've been counting tires for the last 17 years.

From the state of Virginia, down to the state of Florida, around the horn, out to Texas, that 14-state area consumes probably 130 percent of the tires that they generate.

The reason for that, in that belt -- around the horn, from Virginia, all the way down the coast, around the other coast, and out to Texas -- there's a very strong demand for tire-derived fuel in the pulp and paper industry. California has no pulp and paper mills that I'm

aware of.

MEMBER CHESBRO: We have one pulp.

MR. BLUMENTHAL: I said that I was aware of. I didn't say it didn't have any. I just said I didn't know yet. But that's not the point.

As a matter of fact, even if -- even if you had ten, I doubt many tires would go to them, because on the West Coast, petcoke is very inexpensive. And when you compete -- compare the tires versus engineering you can get from petcoke, petcoke wins.

So up in the Northwest, up in Washington and Oregon, where actually the TDF market first began in this country, in pulp and paper mills, those same mills today that used tire-derived fuel 20 years ago are now -- are now not using tires. They are using petcoke. Why? It's cheaper.

So there's more supply of petcoke up on this coast than in the Southwest, than in the Southeast. And consequently, we're not selling TDF to the pulp and paper mills on the West Coast. We are selling TDF to the pulp and paper mills in the South and southeastern part of the country. Tremendous demand, because the cost of natural gas has gone up three times the national average.

So what we're finding is, that 14-state area is taking tires in from Pennsylvania, from Michigan, from

Illinois, from Tennessee, from Texas. So we're seeing a flow of tires away from other states, into this market sink.

There are other areas that have strong market sinks as well -- new England, with a strong TDF market. Once again, three pulp and paper mills are taking in about 9, 10 million tires a year. And also in Michigan, where you have a combination of pulp and paper mills and industrial boilers that are taking in tires from the Midwest. But you get out into the Plain states and in the Northwest, markets are few and far between.

So it's an average number. It's not, every state has this. It's an average number. This number is brought up, the curb is brought up, because you have some states are taking 120 percent of the tires that they generate, such as Mississippi or Louisiana. Or the state of Alabama takes in 17 million tires a year for fuel. They have 5 million people -- they have four and a half million people. They are bringing tires in from five different states.

So it's a very complex model, how tires get from point A to point B.

COMMITTEE CHAIR PETERSEN: Okay.

MR. BLUMENTHAL: So about this study, we have no problem with the study per se. There are some traps you

have to watch out for, though. And I would like to just talk about -- since we were -- talked about our simplistic approach to this -- looking at number of tires that are generated in the country, I'd like to make some comments to that.

RMA has been tracking tires, the number of tires being scrapped, for the last 14 years. We have been able to find out the numbers of tires that have been sold in the country, not by state, because we can't do that. We can't track by state. We cannot track by type.

We track by units, and we track by gross numbers. And we've always gone right to the manufacturers. That's us. And we've always double-checked our numbers against industry numbers, such as the tire industry publications that also track this. And our numbers are virtually identical. We get them from the same source.

We also track our population data by the numbers that the states give us. So the state will send us the number of people that they have living in their state. Whatever they send us, we use. We do not change state data. We may know it might be wrong, but we do not -- we made this -- we made this choice, 14 years ago, 16 years ago, when we first started doing these market reports. And that rule has not changed. So we accept the data that all the states send us, for the number of tires that they

do generate and the population that they do have. And this is how we come up with our numbers.

It is true, we do not track sale of tires to governments. You do not receive a fee. No state receives a fee from tires sold to government agencies.

Let me take that back. One state now does; I think Louisiana changed their rules, and now they put a fee onto tires sold to state vehicles. But all of the states do not. So if the states don't put a fee on to it, you're not tracking it.

We also do not track off-road tires. The only tires that go into our survey are what's called DOT tires, on-road tires. So off-road tires, construction tires, we do not count. And we don't count this, not only because DOT does not -- because we don't count non-DOT tires, but once again, only two states have fees and regulations on off-road tires. All other states do not regulate anything over 25 inches. So the only two states are Minnesota and Arizona.

And I would challenge you to come up and prove me wrong that the State of California has regulations on OTRs. And I don't think they were included in your last survey. The weight of those things are tremendous. One tire weighs 10,000 pounds. So we do not track those because it would skew the numbers. And also, we made a

decision 14, 15 years ago, that we would accept data from the states on tires which they regulate. We knew this was not perfect, but it's really the only data that we've had.

Okay?

We -- this last market report, we made a change. We track in both weight and in units. So we have that data now. And that data on weight has been bifurcated because there is a new PTE, passenger tire equivalent of 22.5 pounds. The old number was 20 pounds per tire. Years ago, it was 18.7 pounds. The weight of tires, as was pointed out, correctly, is going up because of the advent of the sales of SUVs and light-truck tires and some of the heavier vehicles out on the road.

Today there are more SUVs sold than passenger car tires -- passenger cars, period. So of course, the weight has been going up over time, so the average weight of tires has been going up.

But there are two different average weights. I want to caution the folks, here, of looking at this bifurcation. The standard PTE that the industry now accepts is 22.5 pounds for light truck and passenger car tires. But the average weight of all tires out there, excluding non-DOT tires, is 33 pounds. Why? Because the PTE was designed to average the weight.

So how many average passenger car tires would it

take to equal one off-the-road tire or one heavy truck tire? Well, let's make it easy.

Way back when, it used to be 20 pounds per tire. A heavy truck tire was a hundred pounds. It was 5 PTEs. Even I could figure that one out. Now it's 22.5. But the weight of a heavy truck tire is 110 pounds.

In a year and a half, when we go through the exercise again, the weight of the heavy truck tires will be 120 pounds. And we think that the weight of the PTE will go up as well. We figure that the weight of the aggregate average tire will also go up from the current 33 pounds to probably 34 pounds or so. This is a changing playing field. That needs to be taken into consideration.

But we do have weight, and we do have units. And the 86 percent is based on units. Why? Because that's the way we began it, that's the way that EPA first did the report in 1990. That's the way we did our first report in 1990. It was based on units. We didn't have weight data. Today, we certainly do.

The Resource Conservation Challenge, the RCC from EPA, has accepted the weight of 22.5 and 33 as the average weights of tires. And I would hope that would remain consistent.

RMA does not track the sale of illegal tires. I want to make that clear and official. We don't track

illegal anything. Of course we can't track it.

But we do capture all of the sales of tires in the U.S., whatever that is, because we know how many tires were manufactured here, we know how many tires were imported here, and you can't escape what's either made or what's imported and sold. That probably captures all of the tires that are out here.

Did I mention, we do not count government vehicles, we do not count off-road tires. And is it simple? We try to keep it as simple as possible. We did not take into consideration migration. If you guys can do that, more power to you.

What we do want to say about the -- how we recalculated your own numbers, and why we get yelled at for that, in your state numbers, you included retreaded tires. Now, there's nothing wrong with retreaded tires. We wholly support the use and expansion of retreaded tires. But a retread ain't a scrapped tire. And when we look at number of scrap tires, what you call "waste tires," by definition, you cannot include retreaded tires in that number; it is not an apple-apple comparison.

In Europe, yes, they count them. But in all other 49 states, no one counts retreads into their scrap tire numbers.

So when we took out the number of retreads from

your own numbers, and recalculated, that's how we came up with the 68 percent here, in the state, as opposed to your 75 percent, because we took out the factor of four retreads.

Nothing wrong with retreads. They are great. We want to use more of them. They are fine, they are dandy. But they are not scrap tires. They should not be included in any scrap tire report, because they are not scrap tires. By definition, they are being used for their original purpose. And that's the whole idea here.

It is the first R. It is "reduction." The more retreads that you have, the fewer scrap tires that you are going to generate. So if you count that, and if you count used tires, we think you are double-dipping, and your numbers are going to be off, and we're going to talk about that.

We talked about the PTEs. We talked about some of the parameters, that there are no fees on these tires here. So if you start counting in your off-road tires that don't have fees on them, I think your weight is going to be skewed, and your results may not be as accurate for the purposes that you want them.

And I think I had one more -- okay. Yeah, the RCC.

Average weights of tires; I think it's important

to point out that there is a difference in the weight of an original equipment tire and the weight of a replacement tire. The original equipment tire is that tire you buy on the new vehicle. Say you buy a brand X car right here, has four tires on it. And you go out and sometime later you replace all four tires with the same brand, the same model, the same everything.

Those replacement tires may be 5 to 6 pounds heavier than the original equipment tires that you had on your new vehicle. Why? Something called CAFE, Corporate Average Fuel Economy. The Bible says, you can only serve one master. Well, the tire manufacturers serve the auto industry. Auto industry wants a wider tire that has low rolling resistance. It's this whole thing about rolling resistance here, in the state of California, looking at trying to keep the rolling resistance the same on replacement tires as on new tires. It can be done, but you are going to have a higher generation of scrap tires, because the tires on your original equipment are warranted for maybe 40,000 miles. And your replacement tires are probably warranted for 60,000 miles.

So right there, you know, you got a half number of tires that could be -- that could be an increase of at least 50 percent, all things being equal.

All things are not equal. One of the things that

the Waste Board is doing in conjunction with the RMA is getting on this education program on tire care and maintenance. One of the problems that these guys are going to have is trying to calculate the average life of a tire.

We did this a couple of years ago, and we came up with a magnificent discovery, that most of the tires, whether they were new or replacement tires, don't get past three years. The majority do not pass three years.

50 percent of them are damaged on the road for one reason or another -- potholes, chuckholes, go over curbs, whatever. Road damage takes out half the tires. Road damage causes 50 percent of the reasons why tires are scrapped. Road damage, not wear. Road damage.

So you can calculate out what the expected life is going to be, all things being equal, but road damage has to be taken into account.

Are you writing this down?

Number 2. Underinflated tires is the No. 2 cause, which is why we've been banging on all states, running around here saying, "Please work with us. We'll give you the information. Do this on tire care." Now the states are. And we're really happy for that, because you are producing 40 million scrap tires a year.

Arguably, if you would get everybody -- if you

would get everybody to properly inflate their tires, you could probably reduce that by 10 percent a year, because you are getting that kind of excess wear on the tires because they are underinflated.

We did a study, a couple years ago, looking at that very issue. 75 percent of all the tires on the road are being driven underinflated.

COMMITTEE CHAIR PETERSEN: What --

MR. BLUMENTHAL: Not everything is --

COMMITTEE CHAIR PETERSEN: It's amazing.

Now, can you calculate what effect that has on greenhouse gases?

MR. BLUMENTHAL: It is a tremendous, tremendous number. And I don't know what it is offhand.

But there are three bad things that happen when you underinflate tires: One is your engine works harder because there's more surface area to push, so you get lower gas mileage; more exhaust coming out; and you wear your tires faster than they should be worn.

So ain't any of this stuff good.

COMMITTEE CHAIR PETERSEN: That should be part of the campaign.

MR. BLUMENTHAL: Well, that is the campaign. That is the greenhouse gases.

COMMITTEE CHAIR PETERSEN: And the greenhouse

gases?

MR. BLUMENTHAL: They are working on that.

You don't have to say greenhouse gases. You should say, "We're going to save you money." Because I have to go out and replace two sets of tires. And I just got the estimates for it. I'm going to have to go and steal some more tires and sell them on the black market, because the price of tires is going up today.

But if you get this education out there, level the playing field, and get more people to start inflating their tires, you will get a more average number. But still, road hazards are still the No. 1 cause for the scrapping of tires. So all of this needs to be taken into account. It's not a perfect playing field.

And while we have no problem with this, we're very concerned that if you put in certain assumptions -- all things being equal, the tire should last this long, the weights of tires -- and you add tires that no one else is including in their numbers, you will get a higher number of tires generated, naturally, and you will get a higher PTE number. That's just math. Of course you will.

But look at what everybody else is doing and look at what your regulations call for, and then make your choices on how this program is going to move forward.

And of course, we'll be happy to work with staff.

COMMITTEE CHAIR PETERSEN: I was just going to say Michael, chime in here. I love this. That was very interesting.

MR. BLUMENTHAL: We're not saying though -- we're saying there's things that even a hard look like this has overlooked, and there needs to be some understanding here.

COMMITTEE CHAIR PETERSEN: Thank you, Michael.

MR. BLUMENTHAL: Thank you.

COMMITTEE CHAIR PETERSEN: You guys, thank you for all of this on the tires.

MR. NEWMAN: If you don't mind, I just want to respond to a couple things.

First of all, I want to say that I don't mean to say anything disparaging about the RMA or what they have done. In fact, Michael, and the data they've produced, was very, very helpful to us.

And when I say that the one tire per person per year measure is more simplistic than what we do, I don't think there's an alternative to that when you're looking at all 59 states.

If you asked me, you know, for a county-by-county number for California, I would have to say, "Well, here's the average I have."

So they do a very good job. They were very helpful to us. And I don't want to say anything other

than they have been very helpful to us.

On the couple of the things that Michael pointed out, the one -- you can set the PTE number in our model to be whatever you want. If you would rather calculate it as 22.5, because that's where you think everyone is going, it's a parameter that you change in one cell and it calculates the number that way. So it's capable of doing that.

On the weight of tires, we looked at the average weight of an OE tire and of a replacement tire. So we have taken that into account. And we also reported the average tread life across all the tires. Some last longer, because they don't have a road hazard. Some last much less than the average because they do have a road hazard. So our number is the average amount of time a tire spends on the road, not the rate of tread life, but the actual average tread life, according to the data that we have. And to the extent that data is wrong or if we have used the wrong number and Michael wants to help me put in the right number, that's another parameter that we will just change the value and everything recalculates.

That's the, I think, nice thing about the model that we built is that if there is a different parameter value, then it's very easy to update.

And then finally, on the issue of whether you want

to include off-road tires, that's just really a decision about how you want to use the results. If you want to know how much waste is actually being generated, then it makes sense to include it. If you want to compare yourself to other states, then it makes sense not to include it.

And then finally, on the retreads, what we did is we estimated how long a tire goes until it's retreaded. Then we estimated the amount of waste generated during retreading. So something like 25 percent of the weight because of waste. They take the old tread off. That goes into the waste stream. But the casing -- the side walls and the casing, that moves on and gets -- goes on again until it's retreaded. And we don't count it in waste until the casing wears out, after two or three or four retreadings.

So I think we're actually accurately accounting for the way retreads enter the waste stream.

COMMITTEE CHAIR PETERSEN: Thank you very much.

Okay. We've one more speaker.

TIRE MANAGEMENT BRANCH MANAGER DELMAGE: Chairman Petersen?

COMMITTEE CHAIR PETERSEN: Yes.

TIRE MANAGEMENT BRANCH MANAGER DELMAGE: Before we go on, if I could add a couple things to those comments.

One of the interesting things for me that came out of this study was particularly the off-road tires. For instance, it showed the numbers being less than a percent of sales, but the amount of waste being about 4 percent.

But we've talked to some people about how many off-road tires are ending up in Azusa, and it looks like it's about 60 percent.

So it's something that we were very interested in. Off-road tires are big and bulky and hard to handle, and they take up a big part of our waste stream so we're very interested in getting a good look at those.

COMMITTEE CHAIR PETERSEN: Okay. Thank you, Mitch.

Doctor?

MR. TAKALLOU: Thank you. Barry Takallou CRM.

There were some comments about energy recovery from tires. I just wanted to point out, CRM, we operate tire recycling plants in three states: California, Arizona, and New York.

And sometimes, we sit and look at all of these diversion numbers, national numbers, the state-by-state numbers. And I'm the guy on the street, you know, trying these tires. Sometimes the numbers doesn't make sense to us. So why these -- you know, what's the discrepancy?

COMMITTEE CHAIR PETERSEN: I've heard so many

numbers, my brain keeps retreading.

MR. TAKALLOU: Going back to energy recovery, we recycle tires. The difference what California policy versus other states, which we operate, energy recovery is fine. However, it's not sustainable. It's dependent on the fuel prices. The fuel prices are high, the cement companies, they want to burn tires. If it's low, it drops. And we have seen that in the state of New York. We opened a tire recycling plant in New York, and everybody told us, "How can you get tires." We can get as many tires as we want. And reality is they welcome this. It's not by a mandate. The tires was going to -- the energy recovery is going to recycled.

We went back to sustainability of their tire recycling. For instance, crumb rubber for asphalt, for synthetic turf. The executive director of Synthetic Turf Council just a couple of months ago, made the announcement. He's expecting 20 percent increase on the consumption.

They cannot put in a sports field without artificial turf, without crumb rubber. So it is a value added. When they need the product, price doesn't matter. It's a value. You are converting a product with this waste material to something is a value added product.

So the difference, what we see, between recycling

and energy recovery, recycling, converting it to value added, is a sustainable -- it's growing. Energy recovery is very dependent on the fuel prices and is very volatile.

One of the opportunities for California which we need to consider is export market. We import almost everything from Pacific Rim. But Pacific Rim countries like China, they ban export/import of old tires. But you can export crumb rubber.

COMMITTEE CHAIR PETERSEN: Right.

MR. TAKALLOU: Last year, we did export quite a bit of crumb rubber to Pacific Rim countries. That's one of the reasons for it, because the containers going back into the Pacific Rims -- we have a very inexpensive transportation cost on our product, which is a commodity, low value. So that's the market, in our opinion in California, is for us to consider the export market is going to be huge for us.

To that extent, my company, CRM Company, the good news, some of the data you have seen was the 2005 data. We are in 2007. We feel like we have a shortage of tires. And then I see this gap of 30 million tires diverted and these 10 million tires, where these 10 million tires are? We want them. We need them.

And I think there are some more refinement of data needs to be done.

COMMITTEE CHAIR PETERSEN: Doctor, have you talked to Azusa Waste Management? They got a lot of tires over there. You know, they would like to save the air space, I'm sure.

MR. TAKALLOU: Well, that's -- that's -- that's -- I don't understand, two of the largest suppliers of tires to Azusa now bring tires to us. It's being diverted.

COMMITTEE CHAIR PETERSEN: The rates went up in the landfill; right?

MR. TAKALLOU: Well, they went up, we went down, because, as I said, it's a value add. So the economics works itself out.

And yesterday our plan was shut down because of a shortage of tires. We already seeing that in the actual market. And we need some help from Waste Board to -- I know you guys cannot divert tires, but you can establish policies. We can get those tires.

COMMITTEE CHAIR PETERSEN: Well, again, that's part of our Five-Year Plan and the input that goes into the Five-Year Plan. And Doctor, we are more than willing to take your input on this, since you are in the marketplace, you're on the street, doing what you do, you're invaluable to where we're going to go here. So I would encourage them to meet with staff and encourage them to put this into the plan.

MR. TAKALLOU: And I want to talk on behalf of industry.

COMMITTEE CHAIR PETERSEN: I understand that. I understand that.

MR. TAKALLOU: You have the finest processors in the state of California. California processes almost carrying the market share of 50 percent of the synthetic turf market share, nationwide.

And there are things can be done within the policy to -- to divert the tires, more and more, to recyclers. And that's something we can talk about in the Five-Year Plan.

COMMITTEE CHAIR PETERSEN: That's exactly what I suggest you do. Because that's the forum -- and I appreciate the information today. But that's the forum we need to participate in, to make this all happen in the right way. So that's where we need to go.

MR. TAKALLOU: You mentioned greenhouse gases, CO2. We are working on the studies to find out the benefits of the use of asphalt rubber.

COMMITTEE CHAIR PETERSEN: We are very interested in those numbers when you get them. Okay?

Thank you very much, Doctor.

MR. TAKALLOU: Thank you.

COMMITTEE CHAIR PETERSEN: I would like to

introduce Ted Rauh, who is here. Congratulations, by the way, and welcome, who is our program director for Waste and Compliance and Mitigation Programs for the Board.

And here we go, Ted. Oh, boy.

If there's any questions, any comments?

Okay. That will conclude today's committee meeting.

Thank you very much.

(Thereupon the California Integrated Waste Management Board, Sustainability and Market Development Committee meeting adjourned at 11:21 a.m.)

CERTIFICATE OF REPORTER

I, KATHRYN S. KENYON, a Certified Shorthand Reporter of the State of California, do hereby certify:

That I am a disinterested person herein; that the foregoing California Integrated Waste Management Board, Sustainability and Market Development Committee meeting was reported in shorthand by me, Kathryn S. Kenyon, a Certified Shorthand Reporter of the State of California, and thereafter transcribed into typewriting.

I further certify that I am not of counsel or attorney for any of the parties to said workshop nor in any way interested in the outcome of said workshop.

IN WITNESS WHEREOF, I have hereunto set my hand this 23rd day of April, 2007.

KATHRYN S. KENYON, CSR
Certified Shorthand Reporter
License No. 13061